

SEQUENCE LISTING

<110> Gerald, Christophe P.G.  
Jones, Kenneth A.  
Bonini, James A.  
Borowsky, Beth

<120> DNA Encoding Mammalian Neuropeptide FF (NPFF) Receptors  
and Uses Thereof

<130> 1795/57155-A

<140>  
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<150> 09/161,113

<151> 1998-09-25

<160> 42

<170> PatentIn Ver. 2.0 - beta

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<213> Rattus norvegicus

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cagaacggga gtgatgtgga gaccaggcatg gcaaccagcc tcaccccttc ctcctactac 180  
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gtcaccaaca tgtttatacct caacctggcc gtcagcgacc tgctgggtgg catcttctgc 360  
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<212> PRT  
<213> Rattus norvegicus

<400> 2  
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Gln Asn Gly Ser Asp Val Glu Thr Ser Met Ala Thr Ser Leu Thr Phe  
20 25 30  
  
Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala  
35 40 45  
  
Ala Tyr Val Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val  
50 55 60  
  
Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met  
65 70 75 80  
  
Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys  
85 90 95  
  
Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp  
100 105 110  
  
Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser  
115 120 125  
  
Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys  
130 135 140  
  
Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Phe  
145 150 155 160  
  
Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser  
165 170 175  
  
Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Leu Asp  
180 185 190  
  
Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro  
195 200 205  
  
Glu Lys Gly Met Arg Lys Val Tyr Thr Ala Val Leu Phe Ala His Ile  
210 215 220

Tyr Leu Val Pro Leu Ala Leu Ile Val Val Met Tyr Val Arg Ile Ala  
225 230 235 240

Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Arg Asp Thr Glu Glu Ala  
245 250 255

Val Ala Glu Gly Gly Arg Thr Ser Arg Arg Arg Ala Arg Val Val His  
260 265 270

Met Leu Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu  
275 280 285

Trp Val Leu Leu Leu Leu Ile Asp Tyr Gly Glu Leu Ser Glu Leu Gln  
290 295 300

Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala  
305 310 315 320

Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu  
325 330 335

Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp  
340 345 350

Pro Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Asn Arg  
355 360 365

Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly  
370 375 380

Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Gly Arg  
385 390 395 400

Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Gly Glu  
405 410 415

Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile  
420 425 430

<210> 3  
<211> 200  
<212> DNA  
<213> Homo sapiens

<400> 3

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gccacccgg ctacaaacct caccttctcc tcctactatc agcacaccctc ccctgtggcg 120  
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gtctgtttca tcgtgctcaa 200

<210> 4

<211> 66

<212> PRT

<213> Homo sapiens

<400> 4

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1 5 10 15

Thr Asn Thr Glu Ala Thr Pro Ala Thr Asn Leu Thr Phe Ser Ser Tyr  
20 25 30

Tyr Gln His Thr Ser Pro Val Ala Ala Met Phe Ile Val Ala Tyr Ala  
35 40 45

Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val Cys Phe Ile  
50 55 60

Val Leu

65

<210> 5

<211> 1302

<212> DNA

<213> Homo sapiens

<400> 5

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aatattacatc atgtgaacta ctatcttac cagcctcaag tggcagcaat cttcattatt 180  
tcctactttc tgatcttctt tttgtgcattg atggaaata ctgtggtttgc ctttatttgc 240  
atgaggaaca aacatatgca cacagtcaact aatctttca tcttaaacctt ggcataagt 300  
gatttacttag ttggcatatt ctgcattgcct ataacactgc tggacaatat tatagcagga 360  
tggccatttg gaaaacacgt gtgcaagatc agtggattgg tccaggaaat atctgtcgca 420  
gcttcagtct ttacgttagt tgcaattgtc gttagataggc tccagtggt ggtctaccct 480  
tttaaaccaa agctcaactat caagacagcg tttgtcatta ttatgatcat ctgggtcccta 540  
gccatcacca ttatgtctcc atctgcagta atgttacatg tgcaagaaga aaaatattac 600  
cgagttagac tcaactccca gaataaaacc agtccagtct actgggtcccg ggaagactgg 660  
ccaaatcagg aaatgaggaa gatctacacc actgtgtgt ttgccaacat ctacctggct 720  
ccctctccc tcattgtcat catgtatggaa aggattggaa tttcaactt cagggctgca 780  
gttccctaca caggcaggaa gaaccaggag cagtggcactg tgggtccag gaagaagcag 840  
aagatcatta agatgtctt gattgtggcc ctgctttta ttctctcatg gctgccccctg 900  
tggactctaa tgatgtctc agactacgt gacctttctc caaatgaact gcagatcatc 960  
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atcatttatg gtttcttcaa cgagaatttc cgccgtgggt tccaagaagc tttccagctc 1080  
cagctctgcc aaaaaagagc aaaggctatg gaagcttatg ccctaaaagc taaaagccat 1140  
gtgctcataa acacatctaa tcagcttgtc caggaatcta cattcaaaa ccctcatggg 1200  
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<210> 6  
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<212> PRT  
<213> Homo sapiens

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Trp Asn Val Asn Asp Thr Lys His His Leu Tyr Ser Asp Ile Asn Ile  
20 25 30  
  
Thr Tyr Val Asn Tyr Tyr Leu His Gln Pro Gln Val Ala Ala Ile Phe  
35 40 45  
  
Ile Ile Ser Tyr Phe Leu Ile Phe Phe Leu Cys Met Met Gly Asn Thr  
50 55 60  
  
Val Val Cys Phe Ile Val Met Arg Asn Lys His Met His Thr Val Thr  
65 70 75 80  
  
Asn Leu Phe Ile Leu Asn Leu Ala Ile Ser Asp Leu Leu Val Gly Ile  
85 90 95  
  
Phe Cys Met Pro Ile Thr Leu Leu Asp Asn Ile Ile Ala Gly Trp Pro  
100 105 110  
  
Phe Gly Asn Thr Met Cys Lys Ile Ser Gly Leu Val Gln Gly Ile Ser  
115 120 125  
  
Val Ala Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Asp Arg Phe  
130 135 140  
  
Gln Cys Val Val Tyr Pro Phe Lys Pro Lys Leu Thr Ile Lys Thr Ala  
145 150 155 160  
  
Phe Val Ile Ile Met Ile Ile Trp Val Leu Ala Ile Thr Ile Met Ser  
165 170 175  
  
Pro Ser Ala Val Met Leu His Val Gln Glu Glu Lys Tyr Tyr Arg Val  
180 185 190  
  
Arg Leu Asn Ser Gln Asn Lys Thr Ser Pro Val Tyr Trp Cys Arg Glu  
195 200 205

Asp Trp Pro Asn Gln Glu Met Arg Lys Ile Tyr Thr Thr Val Leu Phe  
210 215 220

Ala Asn Ile Tyr Leu Ala Pro Leu Ser Leu Ile Val Ile Met Tyr Gly  
225 230 235 240

Arg Ile Gly Ile Ser Leu Phe Arg Ala Ala Val Pro His Thr Gly Arg  
245 250 255

Lys Asn Gln Glu Gln Trp His Val Val Ser Arg Lys Lys Gln Lys Ile  
260 265 270

Ile Lys Met Leu Leu Ile Val Ala Leu Leu Phe Ile Leu Ser Trp Leu  
275 280 285

Pro Leu Trp Thr Leu Met Met Leu Ser Asp Tyr Ala Asp Leu Ser Pro  
290 295 300

Asn Glu Leu Gln Ile Ile Asn Ile Tyr Ile Tyr Pro Phe Ala His Trp  
305 310 315 320

Leu Ala Phe Gly Asn Ser Ser Val Asn Pro Ile Ile Tyr Gly Phe Phe  
325 330 335

Asn Glu Asn Phe Arg Arg Gly Phe Gln Glu Ala Phe Gln Leu Gln Leu  
340 345 350

Cys Gln Lys Arg Ala Lys Pro Met Glu Ala Tyr Ala Leu Lys Ala Lys  
355 360 365

Ser His Val Leu Ile Asn Thr Ser Asn Gln Leu Val Gln Glu Ser Thr  
370 375 380

Phe Gln Asn Pro His Gly Glu Thr Leu Leu Tyr Arg Lys Ser Ala Glu  
385 390 395 400

Lys Pro Gln Gln Glu Leu Val Met Glu Glu Leu Lys Glu Thr Thr Asn  
405 410 415

Ser Ser Glu Ile  
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<210> 7  
<211> 1293  
<212> DNA  
<213> Homo sapiens

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cctgtggcgg	ccatgttcat	tgtggcctat	gcgtcatct	tcctgtctg	catgtggc	180
aacaccctgg	tctgttcat	cgtgtcaag	aaccggcaca	tgcatactgt	caccaacatg	240
ttcattctca	acctggctgt	cagtgacctg	ctggggca	tcttctgcat	gccaccacc	300
cttgtggaca	acctcatcac	tgggtggccc	ttcgacaatg	ccacatgca	gatgagcggc	360
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aggttccgct	gcatcgtgca	ccctttccgc	gagaagctga	ccctgcccga	ggcgctcg	480
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acggtcaccc	gtgaggagea	caacttcatg	gtggacgccc	gcaaccgctc	ctaccctctc	600
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ttctcgacaca	tctacctggc	gcccgtggcg	ctcatctgtgg	tcatgtacgc	ccgcacatcg	720
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aacagcagcg	ccaacccat	catctacggc	tacttcaacg	agaacttccg	ccgcggcttc	1020
caggccgcct	tccgcggcc	cctctgccc	cgccccgtcg	ggagccacaa	ggaggcctac	1080
tccgagcggc	ccggcggt	tctgcacagg	cgggtcttcg	tgggtgtcg	gcccaagc	1140
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<210> 8

<211> 430

<212> PRT

<213> *Homo sapiens*

<400> 8

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Gln Asn Gly Thr Asn Thr Glu Ala Thr Pro Ala Thr Asn Leu Thr Phe  
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Ser Ser Tyr Tyr Gln His Thr Ser Pro Val Ala Ala Met Phe Ile Val  
35 40 45

Ala Tyr Ala Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val  
50 55 60

Cys Phe Ile Val Leu Lys Asn Arg His Met His Thr Val Thr Asn Met  
 65                  70                  75                  80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys  
85 90 95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp  
100 105 110

Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser  
115 120 125

Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys  
130 135 140

Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Val  
145 150 155 160

Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Ile Met Cys Pro Ser  
165 170 175

Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Val Asp  
180 185 190

Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro  
195 200 205

Glu Lys Gly Met Arg Arg Val Tyr Thr Val Leu Phe Ser His Ile  
210 215 220

Tyr Leu Ala Pro Leu Ala Leu Ile Val Val Met Tyr Ala Arg Ile Ala  
225 230 235 240

Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Pro Gly Gly Glu Glu Ala  
245 250 255

Ala Asp Pro Arg Ala Ser Arg Arg Ala Arg Val Val His Met Leu  
260 265 270

Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu Trp Ala  
275 280 285

Leu Leu Leu Ile Asp Tyr Gly Gln Leu Ser Ala Pro Gln Leu His  
290 295 300

Leu Val Thr Val Tyr Ala Phe Pro Phe Ala His Trp Leu Ala Phe Phe  
305 310 315 320

Asn Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu Asn Phe  
325 330 335

Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Arg Leu Cys Pro Arg Pro  
340 345 350

Ser Gly Ser His Lys Glu Ala Tyr Ser Glu Arg Pro Gly Gly Leu Leu  
355 360 365

His Arg Arg Val Phe Val Val Val Arg Pro Ser Asp Ser Gly Leu Pro  
370 375 380

Ser Glu Ser Gly Pro Ser Ser Gly Ala Pro Arg Pro Gly Arg Leu Pro  
385 390 395 400

Leu Arg Asn Gly Arg Val Ala His His Gly Leu Pro Arg Glu Gly Pro  
405 410 415

Gly Cys Ser His Leu Pro Leu Thr Ile Pro Ala Trp Asp Ile  
420 425 430

<210> 9

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 9

gyntwyrynn tnwsntgght ncc

23

<210> 10

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 10

avnadngbrw avannanngg rtt

23

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 11

ttatgcttcc ggctcgtatg ttgtg

25

<210> 12

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer/probe

<400> 12  
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<210> 13  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 13  
ggtgctgctg ctgctcatcg actatg 26

<210> 14  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 14  
ttggcgctgc tgtggaagaa ggccag 26

<210> 15  
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<223> Description of Artificial Sequence: primer/probe

<400> 15  
cggtgctt cgcgcacatc tacc 24

<210> 16  
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<212> DNA  
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<223> Description of Artificial Sequence: primer/probe

<400> 16  
tgccaagggg aaggcgtaga ccgacagcag gtgcagttgc agctcgatca gctccccata 60

<210> 17

<211> 53  
<212> DNA  
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<223> Description of Artificial Sequence: primer/probe

<400> 17  
ccacccttgt ggacaacctc atcaactgggt ggcgcattcga caatgccaca tgc 53

<210> 18  
<211> 24  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 18  
ctgctctgca tggtgccaa cacc 24

<210> 19  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 19  
gacggcgatg gtgacgagcg c 21

<210> 20  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 20  
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atgcc 65

<210> 21  
<211> 24  
<212> DNA  
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<220>

<223> Description of Artificial Sequence: primer/probe

<400> 21  
gcgagaagct gaccctgcgg aagg 24

<210> 22  
<211> 24  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 22  
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<210> 23  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 23  
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<210> 24  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 24  
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<210> 25  
<211> 23  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 25  
cagcctccca acagcagttg gcc 23

<210> 26

<211> 35  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

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<210> 27  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 27  
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<210> 28  
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<212> DNA  
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<220>  
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<400> 28  
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<210> 29  
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<220>  
<223> Description of Artificial Sequence: primer/probe

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<210> 30  
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<223> Description of Artificial Sequence: primer/probe

<400> 30  
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<210> 31  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 31 26  
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<210> 32  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 32 26  
gaagatctac accactgtgc tgg 26

<210> 33  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 33 25  
aacatctacc tggctccccct ctccc

<210> 34  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 34 25  
ttgtcatcat gtatggaagg attgg

<210> 35  
<211> 24

<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 35  
gaccacacac tggaacctat ctac 24

<210> 36  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 36  
gcaattgcaa ctaacgtaaa gactg 25

<210> 37  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 37  
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<210> 38  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 38  
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<210> 39  
<211> 24  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 39  
ctcctactac caacactcct ctcc

24

<210> 40  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer/probe

<400> 40  
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19

<210> 41  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 41  
gatcagtgga ttggccagg gaatatc

27

<210> 42  
<211> 25  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: primer/probe

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25